

Draft Stream Flow Categorization and Streamflow Criteria
To be determined at the source of each prospective withdrawal and at the next downstream node (Small HUC)
Dated: 14 September 2010

Category	Condition	Goals	Criteria	Narrative ¹
<u>Category 1:</u> 6% of basins currently in this category	Relatively un-impacted by human alteration (as expressed by impervious cover and flow alteration). The combined effects of flow alteration and impervious cover are expected to reduce the relative abundance of fluvial fish by less than 5%. Sensitive species expected are expected to be reduced by less than one third.	Maintain High Quality Fluvial Habitat Protect existing water use	Zero to 5% ² flow alteration ³ depending on impervious cover ⁴ . Maximum impervious cover (IC) to be determined (TBD)	No activity that results in an increase in alteration. No activity within the category unless there is no feasible alternative. If there is no feasible alternative, then the activity shall be minimized and or mitigated to the extent necessary to result in no net change of conditions. Site specific studies are required before alterations to flow can occur in these sub-basins.
<u>Category 2:</u> 8% of basins currently in this category	Fish communities are likely intact and of good quality. The combined effects of flow alteration and impervious cover are expected to reduce the relative abundance of fluvial fish by less than 15%. Sensitive species expected are expected to be reduced by less than two-thirds.	Maintain Good Quality Fluvial Habitat Protect existing water use	No more than 13% flow alteration depending on impervious cover ⁴ . Maximum IC TBD Water bodies or portions thereof that are identified as “coldwater fisheries” shall be treated as Category 1 waters	No activity that results in a lowering of the category or activity within the category unless there is no practicable alternative. If there is no practicable alternative, then the activity shall be minimized and or mitigated to the extent necessary to result in no net change of conditions. Site specific studies will be increasingly likely as the boundary between categories is approached.
<u>Category 3:</u> 15% of basins currently in this category	The fish community has undergone considerable changes in the structure. The combined effects of flow alteration and impervious cover are expected to reduce the relative abundance of fluvial fish by less than 35%. Species diversity has likely been altered by the loss of sensitive species	Maintain the quality of the Fluvial Habitat Protect existing water use	No more than 32% flow alteration, depending on impervious cover ⁴ . Maximum IC TBD Water bodies or portions thereof that are identified as “coldwater fisheries” shall be treated as Category 1 waters	No activity within the category or that that results in a lowering of the category unless there is no practicable alternative. If there is no practicable alternative, then the activity shall be minimized and or mitigated to the extent practicable. Site specific studies will be increasingly likely as the boundary between categories is approached.

¹ This summary is offered for discussion purposes only and does not necessarily represent current statute, regulation, or policy positions of the Commonwealth of Massachusetts unless specifically acknowledged. This summary is not to be cited as a reference. Its purpose is to foster open and broad discussion of the issues of sustainable water management as well as help assure public awareness of the discussions as of the date of the presentation.

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Category	Condition	Goals	Criteria	Narrative ¹
<u>Category 4:</u> 17% of Basins currently in this category	Fish communities have undergone substantial reductions in relative abundance of sensitive taxa and fluvial species diversity. The combined effects of flow alteration and impervious cover are expected to reduce the relative abundance of fluvial fish by less than 65%. Further reductions in species diversity are expected.	Improve Fluvial Habitat Protect existing water use	No more than 60% flow alteration, depending on impervious cover ⁴ . Maximum impervious cover TBD Water bodies or portions thereof that are identified as “coldwater fisheries” shall be treated as category 1 waters.	No activity that that results in a lowering of the category unless there is no practicable alternative. Any activity shall be minimized and or mitigated to the extent practicable. Site specific studies will be increasingly likely as the boundary between categories is approached.
<u>Category 5:</u> 53% of basins currently in this category	Severe changes to structure and function. The combined effects of flow alteration and impervious cover are expected to reduce the relative abundance of fluvial fish by more than 65%. Species diversity further reduced and reductions in tolerant organisms are evident	Improve Fluvial Habitat Protect existing water use	Greater than 60% flow alteration, depending on impervious cover ⁴ . Maximum impervious cover TBD Water bodies or portions thereof that are identified as “coldwater fisheries” shall be treated as Category 1 waters	Any activity shall be minimized and or mitigated to result in improved conditions.

1. The terms “feasible” and “practicable” need to be linked to considerations in 310 CMR36.26(1)
2. Implementation Tool-Water Management Act Permit
3. Flow alteration is calculated as the Net absolute August alteration, which is the same statistic used during categorization discussions. One issue that needs to be discussed is season flow requirements for each category.
4. Increases in the amount of impervious cover within a sub-basin result in reductions in the maximum allowable flow alteration. The maximum flow alteration for this category will only be considered in basins with 1% or less IC.

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